

DECISION ISSUED BY

THE INFOCOMM MEDIA DEVELOPMENT AUTHORITY

ON

SINGAPORE TELECOMMUNICATIONS LIMITED'S REFERENCE INTERCONNECTION OFFER

FOR

IP-BASED INTERCONNECTION FOR VOICE SERVICES

13 NOVEMBER 2025

DECISION ON SINGAPORE TELECOMMUNICATIONS LIMITED'S REFERENCE INTERCONNECTION OFFER FOR INTERNET PROTOCOL-BASED INTERCONNECTION FOR VOICE SERVICES

- 1. On 28 July 2025, the Infocomm Media Development Authority ("IMDA") issued a public consultation to seek comments on Singapore Telecommunications Limited's ("Singtel") proposed Reference Interconnection Offer ("RIO") for establishing Internet Protocol ("IP")-based interconnection with Singtel for voice services (the "Public Consultation").
- 2. As informed in the Public Consultation, the RIO documents¹ as submitted by Singtel for the Public Consultation (collectively, the "Consulted Documents") are preliminary drafts as Singtel is currently in the midst of upgrading its interconnection equipment and network to be IP-based. As part of the final step to completing this Public Consultation, IMDA will still require Singtel to submit its proposed Schedule 1 Annexures for public comments.
- 3. For the current Public Consultation on the Consulted Documents, IMDA had received comments from six respondents at the close of the Public Consultation, namely:
 - (a) Cal4care Pte Ltd ("Cal4care");
 - (b) M1 Limited ("**M1**");
 - (c) StarHub Ltd ("StarHub");
 - (d) Symbio Networks Singapore Pte Ltd ("Symbio");
 - (e) Verizon Communications Singapore Pte Ltd ("Verizon"); and
 - (f) Voxbone (Singapore branch) ("Voxbone").
- 4. IMDA thanks all respondents for their views and comments, and has given careful consideration to the issues raised. IMDA sets out below its decisions on the issues raised in the Public Consultation ("**Decision**"). Capitalised terms not specifically defined herein shall have the meanings ascribed to them in the RIO or the Code of Practice for Competition in the Provision of Telecommunication and Media Services (the "**Code**") as appropriate.
- 5. Separately, as the Schedule 1 Annexures to the RIO contains the details of the technical, operational and testing requirements to establish IP-based interconnection with Singtel's network, and Singtel is currently reviewing and fine-tuning its network upgrade for IP-based interconnection, IMDA aims to issue the consultation for the Schedule 1 Annexures in early 2026. The publication of all finalised amendments to the RIO will be advised later after the Schedule 1 Annexures have been consulted and finalised.

¹ The schedules submitted by Singtel are: Main Body; Schedule 1 Physical and Virtual (Distant) Interconnection; Schedule 2A Call Origination Service; Schedule 2B Call Termination Service; Schedule 2C Call Transit Service; Schedule 4A Emergency Call Service; Schedule 8A Co-location for Point-of-Interconnection (POI); Schedule 8 Attachments; Schedule 9 Charges; and Schedule 12 Dictionary.

<u>SINGTEL'S PROPOSED DEVIATIONS FROM POSITIONS IN THE CODE AND EXISTING RIO</u>

- 6. In the Consulted Documents, Singtel proposed some deviations from established positions in the Code and the existing RIO for establishing Signalling System No. 7 ("SS7")-based interconnection with Singtel (the "SS7 RIO"). The deviations which respondents commented on are:
 - (a) Re-defining Points of Interconnection ("**POI**") to be limited to only one configuration, whereby the POI is to be established at the Fibre Distribution Frame ("**FDF**") of the party providing the call origination, call termination, call transit, and emergency services;
 - (b) Removal of existing RIO procedures for a Requesting Licensee and Singtel to discuss alternative location for the POI at any technically feasible point;
 - (c) Removal of existing RIO option for a Services-Based Operator ("**SBO**") Requesting Licensee to be able to obtain the interconnection links from other licensees (i.e., third party) besides Singtel; and
 - (d) Removal of the drawing of the transmission multiplexer ("**MUX**") equipment in the diagram showing the configuration for Physical Interconnection.
- One respondent commented that it was unclear why the existing RIO option to 7. establish the POI at a mutually agreed alternative location was not retained in the proposed RIO. Another respondent commented that with the removal of the drawing of the MUX equipment, it was unclear whether Singtel would prohibit the installation of active equipment (such as the MUX) within the POI colocation space for Facilities-Based Operator ("FBO") Requesting Licensees. The same respondent was of the view that should a Requesting Licensee's active transmission equipment not be allowed to be installed at the co-location space within the Singtel's exchange as leased by the Requesting Licensee, such constraint would adversely impact the interconnection arrangements of the Requesting Licensee as the Requesting Licensee would be compelled to install its active equipment elsewhere, such as at the Requesting Licensee's nearest transmission serving site. The respondent believed that this arrangement might require Singtel to install long-distance transceivers to receive the Requesting Licensee's fibres where such arrangement would be less resilient and could result in significant signal loss and service degradation.

IMDA's Assessment and Decision

8. In relation to the interconnection configuration for POI, section 3 of Appendix 2 of the Code requires that "a Dominant Telecommunication Licensee must offer to allow interconnection to occur at any technically feasible point" and that "the transmission links used for interconnection must connect at mutually agreed

points". In this regard, the Code does not restrict or pre-define at which point interconnection should occur, and where the transmission links used for interconnection are to be connected. The Code requirements are further reflected in the SS7 RIO which provides that the POI may be established at such other interconnection configurations as the parties may agree on.

- 9. As such, IMDA is of the view that Singtel's proposed POI definition as indicated under paragraph 6(a), and the removal of the RIO procedure for discussion of alternative location for POI as stated in paragraph 6(b), are unnecessarily restrictive as it confines the establishment of the POI to be only at the FDF of the party providing the call origination, termination, transit, and emergency services. This is not aligned with the Code requirements. Furthermore, the migration from SS7-based interconnection to IP-based interconnection primarily only entails the underlying change of the signalling protocol for voice call communications across operators' networks, which should not affect the Code requirement for interconnection to occur at any technically feasible point. Given the above, IMDA will require Singtel to comply with the established positions in the Code and the SS7 RIO, including allowing the POI to be established based on mutually agreeable interconnection configuration, and reinstating the procedures as laid out in the SS7 RIO for the parties to discuss alternative location for the POI at any technically feasible point.
- 10. For paragraph 6(c) where Singtel proposed to remove the option for an SBO Requesting Licensee to obtain the interconnection links from a third party, IMDA notes that this would not be aligned with the Code requirement. Section 3.4 of Appendix 2 of the Code requires that "the Services-based Licensee may obtain the transmission link between the two nodes from either the Dominant Telecommunication Licensee or any other Facilities-based Licensee". While the migration from SS7-based interconnection to IP-based interconnection would require a higher bandwidth capacity for the interconnection links (from E1 to 1 Gbps capacity), IMDA notes that this should not affect how and who the SBO Requesting Licensee could acquire its interconnection links from, as there are other FBOs in the market offering 1Gbps links. In this regard, IMDA will require Singtel to comply with the established positions in the Code and the SS7 RIO to allow an SBO Requesting Licensee to acquire its interconnection links from Singtel or another licensee.
- 11. In relation to paragraph 6(d) on Singtel's proposed removal of the MUX equipment, IMDA notes that under section 5.3.5 of Appendix 2 of the Code, "a Dominant Telecommunication Licensee must not restrict the type of equipment co-located so long as it is telecommunication equipment of a type customarily located in a telecommunication operator's exchange building or other network location". As such, IMDA will require Singtel to comply with the Code requirement of not restricting the type of telecommunication equipment (including MUX) co-located within the POI co-location space of an FBO Requesting Licensee.

12. Having taken all of the above into consideration, IMDA is of the view that Singtel's proposed removal or modification of the existing established interconnection-related positions in the Code or the SS7 RIO (as listed in paragraph 6 above) are not warranted, and relevant justifications will be required from Singtel should Singtel wish to retain these proposed deviations. In this regard, IMDA will require Singtel to submit modifications to the Consulted Documents to either reinstate the existing clauses as per the SS7 RIO, or modify the proposed new clauses to reflect established positions in the Code and/or the SS7 RIO.

<u>SINGTEL'S PROPOSED ADDITIONAL SUSPENSION AND/OR TERMINATION</u> RIGHTS

- 13. In the RIO for establishing IP-based interconnection with Singtel for voice services, Singtel proposed to be allowed additional suspension and/or termination rights for these scenarios:
 - (a) Should there be physical or technical harm to Singtel's network, Singtel can suspend the interconnection links with immediate effect. Requesting Licensee is required to rectify the fault and re-establish interconnection with Singtel within 10 calendar days, where the Requesting Licensee will bear all costs incurred by both parties (including interconnection testing costs). Otherwise, Singtel can proceed with termination without any liability to the Requesting Licensee;
 - (b) The party who caused interference or disruption to Singtel's network would be deemed to be in breach of the RIO Agreement, and its RIO services can be unilaterally suspended (with IMDA's prior approval), unless and until it furnishes sufficient evidence to the satisfaction of IMDA demonstrating that no such breach would occur;
 - (c) When a Requesting Licensee has discontinued all its interconnection links with Singtel's network, Singtel can exercise its right to terminate the RIO Agreement and/or relevant schedules with the Requesting Licensee with immediate effect;
 - (d) To address any event, incident, or issue arising from or related to another Requesting Licensee, Singel can suspend a Requesting Licensee's RIO services as may be reasonably necessary, provided such suspension is undertaken in good faith and with due regard to minimising disruption; and
 - (e) Each party complies with all applicable sanctions and export control laws and regulations when accessing, using or providing the RIO services, or the other party shall be entitled to take any actions it deems necessary or appropriate, including suspension or termination of the RIO

Agreement and/or any affected RIO services, without incurring any liability.

- 14. On Singtel's proposed measures to address physical or technical harm to its network in paragraph 13(a), and interference or disruption to its network in paragraph 13(b), some respondents commented that the proposed measures should be reciprocal (and not just to Singtel), as either party's network could be impacted. Another respondent was of the view that Singtel's proposed measures in paragraphs 13(a) and 13(c) were not necessary and should be rejected, as the existing RIO already has suspension and termination procedures.
- 15. In relation to paragraph 13(d), one respondent enquired why it would be reasonable for Singtel to suspend a Requesting Licensee's RIO services due to issues relating to other Requesting Licensees. The same respondent also queried on who should bear the costs and damages suffered by the Requesting Licensee whose RIO services had been suspended by Singtel. Another respondent opined that Singtel's proposed right to suspend a Requesting Licensee's RIO services was too broad, as it would allow Singtel to suspend services to address "any event, incident, or issue". Similarly, for paragraph 13(e) on either party taking any actions necessary or appropriate to ensure compliance with the applicable sanctions and export control laws and regulations (including unilateral suspension or termination of services), one respondent sought clarity on who would bear the costs if such action was subsequently found to be excessive or unnecessary.

IMDA's Assessment and Decision

- 16. IMDA understands Singtel's concerns on the potential vulnerabilities of IP-based networks in general, and hence the need to ensure better protection of Singtel's network to minimise/avoid service disruptions. Singtel's preference is thus to immediately suspend the interconnection links and services to avoid adverse impact to all Requesting Licensees' networks which are interconnected with Singtel's network.
- 17. However, IMDA is also cognisant that such unilateral suspension of interconnection links and/or services could adversely impact Requesting Licensees severely, in terms of disrupting services to their users, and financial and reputational impact. As a safeguard, section 5.6.2 of the Code provides that "any unilateral suspension or termination will only become effective when, and to the extent that, it is approved by IMDA" except where there are "imminent threats to life or property or compliance with other legal or regulatory obligations" which would require immediate action by the suspending or terminating party. Thus, while the Code requires the suspending or terminating party to seek IMDA's prior approval for unilateral suspension or termination, the Code also allows for an immediate unilateral suspension or termination of the interconnection links and/or services in specific circumstances where it is

- necessary so as to safeguard life or property, or comply with legal or regulatory obligations.
- 18. As such, IMDA notes that Singtel's proposed clauses described in paragraphs 13(d) and 13(e) do not comply with the Code requirement to seek IMDA's prior approval for unilateral suspension and/or termination. Thus, IMDA will direct Singtel to submit modifications to the Consulted Documents to require the suspending/terminating party to seek IMDA's prior approval before exercising its right for unilateral suspension and/or termination (except where there are imminent threats to life or property or compliance with other legal or regulatory obligations). IMDA also agrees with the respondents that there should be more clarity on the possible scenarios and circumstances under paragraph 13(d) which would result in Singtel unilaterally suspending the Requesting Licensee's RIO services. In this regard, for the proposed clause under paragraph 13(d), IMDA will require Singtel to make clear the scope and possible scenarios for such unilateral suspension by Singtel. If there is no strong justification to support such unilateral actions, IMDA will reject these proposed additions.
- 19. As for Singtel's proposed clauses described in paragraphs 13(a), 13(b) and 13(c), IMDA agrees with the respondent that the existing RIO would have already laid out the procedures and consequences for the suspension and termination in these scenarios (which would be applicable for both SS7-based and IP-based interconnection regimes). As such, it will be duplicative and inappropriate to further prescribe under the RIO, a set of different suspension and termination procedures and consequences for these clauses. In this regard, IMDA will reject Singtel's proposed additional suspension and/or termination rights in relation to the proposed clauses in paragraphs 13(a), 13(b) and 13(c).

SINGTEL'S PROPOSED MIGRATION DETAILS AND COST OBLIGATIONS

- 20. For existing Requesting Licensees who established SS7-based interconnection with Singtel prior to 6 January 2023, Singtel proposed the following cost obligations for the parties:
 - (a) Each party would bear its own cost arising from the IP-based interconnection migration;
 - (b) Any Network Change request charges associated with IP-based interconnection migration would be waived by Singtel; and
 - (c) For Interconnect Testing charges associated with IP-based interconnection migration, Singtel would waive the charges for the initial five (5) business days, and thereafter, Requesting Licensees would pay Singtel for any additional testing or extension of the testing period.

- 21. In addition, Singtel proposed for all IP-based interconnection migration to be carried out over business days and for a period which Singtel would advise the Requesting Licensee. Singtel also proposed for the Requesting Licensee to bear all costs for any request of additional manpower support or for migration activities outside the stipulated period. Furthermore, should the Requesting Licensee fail to complete the initial IP-based migration successfully, Singtel proposed for Requesting Licensee to bear both parties' costs associated with any subsequent attempts to complete the IP-based migration.
- 22. Singtel further proposed the list of documents to be submitted by the existing Requesting Licensee to Singtel when initiating the migration to IP-based interconnection. These documents include the submission of a Network Change request, call type requests, network migration diagrams, and a comprehensive migration plan outlining all planned migration activities, key milestones and timelines.
- 23. Respondents were generally of the view that since the migration to IP-based interconnection is applicable to all parties, each party should bear its own costs. Thus, the respondents believed that there should be a full waiver of all charges by Singtel for the IP-based Interconnect Testing for the existing operators migrating to IP-based interconnection with Singtel.
- 24. Another respondent submitted that as the industry would be migrating to a new technology, the IP-based Interconnect Testing period might be more than 5 business days, thus it would be arbitrary for Singtel to set a timeframe when there was no established standard timeframe to complete testing for IP-based interconnection. One other respondent was of the view that migration timeframes should be mutually agreed upon rather than being unilaterally fixed by Singtel, and any charges for failed migration attempts should be apportioned based on the party at fault.
- 25. Another respondent opined that IMDA should require all interconnected operators to co-operate closely with each other to facilitate the migration process, such as requiring parties to mutually agree on a reasonable migration plan and process (including a simplified process to exchange call type and network information, without having to go through unnecessary paperwork). The respondent suggested that Singtel should approve all existing call types already in place, unless a specific call type would adversely impact the interoperability, security or functionality of the IP-based interconnection or Singtel's network. The same respondent commented that additional administrative obligations and new charges should not be imposed for the migration as this would unnecessarily delay and frustrate the migration process.

IMDA's Assessment and Decision

26. In relation to the 6 January 2023 date mentioned in paragraph 20, IMDA notes that this is the date of IMDA's decision to implement IP-based interconnection in Singapore. IMDA further notes that existing RIO Requesting Licensees who

have already established SS7-based interconnection with Singtel and would be migrating to IP-based interconnection with Singtel, would all fall under the proposed migration arrangement and cost obligations stated in paragraphs 20, 21 and 22.

- 27. IMDA has carefully considered the respondents' comments and suggestions on Singtel's proposed migration details, including the timeframes and processes. While IMDA understands that Singtel would prefer to clearly limit the number of days each Requesting Licensee could take to conduct testing and migrate, so as to move the overall RIO migration schedule speedily and avoid any unnecessary delay to accommodate individual Requesting Licensee's constraints, IMDA is of the view that each Requesting Licensee's migration timeframes (for testing and other activities) would differ across Requesting Licensees, depending on ground situations (such as full functionality of the parties' equipment) and expertise of the parties conducting the testing and migration work. As such, IMDA believes that it may not be feasible and reasonable for such migration timeframes to be decided by any one party.
- 28. In addition, IMDA is also of the view that Singtel's proposed requested information in paragraph 22 may not be easily provided by a Requesting Licensee alone, and should be discussed with Singtel bilaterally. While IMDA agrees with the respondent that parties should not have to go through unnecessary paperwork for the migration to IP-based interconnection, IMDA is also cognisant of the need to ensure there is accurate and updated information (such as IP addresses) for parties to configure their IP-based switches and equipment. Thus, IMDA believes that the parties would know how best to manage such a balance between going through extensive paperwork and providing updated network information.
- 29. Given the above, IMDA agrees with the respondents that the migration plan and activities, migration process (including the process to exchange call type and network information) and migration timeframes (whether it is the IP-based Interconnect Testing period, or whether it is about conducting the migration over business days/non-business days, office hours/after office hours) should all be mutually discussed and agreed between the parties. IMDA will direct Singtel to state in the Consulted Documents that all parties act in good faith to discuss and mutually agree on the aforementioned migration details, and that parties conduct and complete the migration work expeditiously and without undue delay.
- 30. For the cost obligations of the migration activities <u>within</u> the stipulated timeframes (whereby such timeframes are required by IMDA in the preceding paragraph to be mutually agreed between parties), IMDA notes that Singtel had proposed to either waive the costs (e.g., for the Interconnect Testing) or for each party to bear its own costs (e.g., for migration charges). IMDA is agreeable with Singtel's proposal. However, for the cost obligations of the migration activities <u>outside</u> of the stipulated timeframes, IMDA does not agree to Singtel's proposal that Requesting Licensee pays for these additional charges (as

proposed by Singtel in above paragraphs 20(c) and 21). In this regard, IMDA is of the view that if there is an extension of the testing or migration work outside of the mutually agreed timeframe, it would be more reasonable to attribute the additional charges to the party requesting or responsible for causing such extended testing or migration work. This would include the scenario where such extended testing or migration work is directly attributable to the neglect or fault of Singtel, in which case Singtel should not require the Requesting Licensee to pay these additional charges. IMDA believes such an arrangement would also serve to remind parties to be expeditious in completing the testing or migration work. In line with the foregoing, IMDA will require the party who requests or is responsible for any extended testing or migration work outside of the mutually agreed timeframe to pay for such additional charges.

- 31. Separately, in relation to the overall industry migration timelines, IMDA had stated in the consultation paper for the Public Consultation that Singtel will review the proposed migration schedule with IMDA (the "Overall RIO Migration Schedule") and notify the existing Requesting Licensees accordingly to conduct a phased migration. Singel will provide industry with sufficient time to prepare for the migration with Singtel. To reiterate, such a proposed Overall RIO Migration Schedule will still be subject to the consultation and finalisation of the Schedule 1 Annexures as mentioned under paragraph 5, where the finalised Schedule 1 Annexures and the finalised Consulted Documents will form the entire set of the approved amended RIO for establishing IP-based interconnection with Singtel for voice services.
- 32. As for the migration priority, Singtel proposed in the Consulted Documents to give priority to migrate existing Requesting Licensees who had already established SS7-based interconnection with Singtel over new requests for IPbased interconnection. One respondent submitted that the migration to IPbased interconnection should strictly follow the order of request submissions. Specifically, the respondent was of the view that equal treatment should be given to SBO Requesting Licensees (instead of focusing on migrating FBO Requesting Licensees) so as to ensure equitable prioritisation and nondiscriminatory treatment for all operators concerning interconnection. IMDA notes the respondent's concern and would take this into consideration when reviewing the Overall RIO Migration Schedule with Singtel. Notwithstanding the foregoing, IMDA highlights that the prompt implementation of IP-based interconnection in Singapore is important to support IP-based solutions to combat scam calls (with a focus to address scam-related mobile calls made to the public). In this regard, IMDA intends to first migrate Mobile Network Operators ("MNOs") so as to expedite the roll-out of IP-based solutions for mobile calls.

<u>PRICE REVIEW FOR IP-BASED INTERCONNECTION SERVICES AND PRICING</u> METHODOLOGY

33. One respondent submitted that the interconnection pricing methodology was not specified in the RIO, and emphasised that IP-based interconnection prices should be cost-oriented. The same respondent also commented that certain charges which were determined on a case-by-case basis could create regulatory and business uncertainty.

IMDA's Assessment and Decision

- 34. IMDA clarifies that the determination of prices of Singtel's RIO interconnection prices must be in accordance with the pricing methodology specified under Appendix 1 of the Code. In the event that Singtel wishes to recover any costs under the RIO, Singtel must include a provision in the relevant schedule describing the specific work item in the RIO. However, IMDA recognises that in some cases, certain costs cannot be determined upfront and can only be determined on a case-by-case basis, depending on the circumstances of the request.
- 35. IMDA will conduct a review of the prices for the RIO services affected by the IP-based interconnection after Singtel has completed the setting up of its IP-based network. Accordingly, the prices for the said RIO services will remain unchanged until after such review is completed.

<u>IMPLEMENTING BILL-AND-KEEP ("BAK") REGIME FOR FIXED CALL</u> TERMINATION

- 36. Some respondents submitted that since BAK regime would come into effect after Singtel completed its migration to IP-based interconnection with all existing Requesting Licensees, the RIO should acknowledge this direction now, and incorporate clauses or provide implementation details for industry's comments, so as to allow a seamless transition to BAK when so notified by IMDA. Otherwise, the respondents believed the RIO would need to undergo another round of amendments, which would hamper the efficiency of the transition process. Another respondent also commented that industry should have sufficient time to implement the necessary changes for BAK, including changes to billing systems.
- 37. One of the respondents sought clarification on whether Singtel would still be allowed to charge for Emergency Calls under the BAK regime since it would also be a form of call termination from a locally originated number. The same respondent also proposed various call origination treatment for call types tagged with an international country code.

38. Another respondent requested for IMDA's reconsideration on the implementation of the BAK regime. The respondent submitted that in countries such as Australia and New Zealand, there has been a deliberate move away from BAK settlement models as, without financial disincentives, there could be an increase in spam/telemarketing style traffic. The respondent commented that although the BAK regime would simplify inter-carrier billing, reduce disputes and encourage unlimited and flat rate retail plans, it would favour dominant telecommunication operators and would be disadvantageous to smaller operators who rely on termination revenue for cost recovery (i.e., it would favour operators who would make more calls than they would receive).

IMDA's Assessment and Decision

- 39. IMDA agrees with the respondents that there could be more clarity on the implementation of BAK under RIO. As such, <u>IMDA will require Singtel to reflect in the Consulted Documents</u>, the different sets of Termination Charges for (i) prior to BAK implementation, and (ii) after BAK implementation.
- 40. Furthermore, on the date to implement the BAK regime for fixed call termination, IMDA intends to align the said date to when all Requesting Licensees interconnecting with Singtel are on IP-based interconnection basis. In this regard, IMDA notes that the proposed date by Singtel in the Consulted Document is 1 June 2027. IMDA will require that the BAK regime be implemented by the date at which all Requesting Licensees have interconnected with Singtel on IP-based interconnection basis, or by 1 June 2027 at the latest.
- 41. On a respondent's query under paragraph 37, IMDA clarifies that BAK is implemented for fixed call termination (i.e., Call Termination Service under RIO Schedule 2B). Emergency Call Service under RIO Schedule 4A should not be considered a call termination service as it provides operators with access to emergency services call centres. IMDA would also reiterate that the BAK regime is only applicable between domestically originated and domestically terminated voice traffic. However, IMDA would also like to remind operators that call types tagged with international country codes should not be the sole criteria to determine whether calls are non-domestically originated, and operators should also consider other information (e.g., call detail records) to verify the actual origin of calls.
- 42. On the respondent's view that BAK might encourage more spam/telemarketing calls, IMDA is of the view that it is inconclusive and that there are other regulatory frameworks in place today, such as the Personal Data Protection Commission's Do Not Call registry, to curtail and regulate unsolicited spam/telemarketing style calls. IMDA also disagrees that BAK disadvantages smaller operators because smaller operators typically have a smaller market share of fixed voice users and thus are likely to pay more call termination charges than they receive, which under the upcoming BAK regime, there will be no termination charges for domestically originated and terminated call.

CONCLUSION

- 43. IMDA will direct Singtel to submit to IMDA, its further proposed modifications to the following schedules to give effect to IMDA's Decision:
 - (a) Main Body of the RIO;
 - (b) Schedule 1 Physical and Virtual (Distant) Interconnection;
 - (c) Schedule 2A Call Origination Service;
 - (d) Schedule 2B Call Termination Service;
 - (e) Schedule 2C Call Transit Service;
 - (f) Schedule 4A Emergency Call Service;
 - (g) Schedule 8A Co-location for Point of Interconnection (POI);
 - (h) Schedule 8 Attachments; and
 - (i) Schedule 9 Charges.
- 44. As for the proposed changes by Singtel for Schedule 12 Dictionary, IMDA notes no comment was received during the Public Consultation. IMDA will conditionally approve Schedule 12 Dictionary while awaiting Singtel's further proposed modifications to the schedules as listed in the preceding paragraph.